

Work Order ID 156951***156951***

Page 1

Wednesday, February 08, 2017 10:18:26 AM

Item ID: D3674-043 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Roller Bracket Assembly
Start Date: 1/30/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 2/8/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: DAS 21 9-89 Date: FEB 13 2017 Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3674	B								
100	BAND SAW	0.00							DAS 14 9-89
100									
Bandsaw	Memo	0.01							
Jeaspa Bandsaw	Cut blanks: (1.500" x 2.250") 5.600" long								17/02/23
110	HAAS CNC VERTICAL MACHINING #1	0.00							DAS 08 9-89
110									
HAAS 5AXIS	Memo	0.67							
HAAS CNC vertical machine #5	1-Machine D3674-3 as per Folio Fb483 and Dwg D3674-3.								
	2-Deburr								
	3-Scribe batch number								

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																															
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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																

156951

Wednesday, February 08, 2017 10:18:26 AM

N900040100

Setup Start *NS1*

Stop *NS2*

Cust Item ID:

Start Date: 1/30/2017 **Start Qty:** 4.00 ***4***

Required Date: 2/8/2017 **Req'd Qty:** 4.00 ***1***

Customer:

Reference:

Approvals: **Process Plan:** **Date:** **Tooling:** **Date:**

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

**Insp.
Stamp**

0.00

150

0.01

OC

Memo

Quality Control

MAR 02 2017

Identify as per dwg & Stock Location: Stoso 0.00

160

0.01

Packaging

Memo

Packaging

QC21- Final Inspection - Work Order Release	0.00
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170

0.07

OC

Memo

Quality Control

DAS 21 9-89 MAR 03 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐									

Picklist Print

Wednesday, February 08, 2017 10:18:25 AM

Page 1

Work Order ID: 156951

156951

Parent Item: D3674-043

D3674-043

Parent Item Name: Roller Bracket Assembly

Start Date: 1/30/2017

Required Date: 2/8/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev: A RQ. 16.07.11 Verified by DD.

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3121-21		Manufactured	No				Each	68.0000		8			
D3121-21									**			17/03/01	DAS 36 9-89
Bolt													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST018				68					
				150132				27		8			
				150589				41					
D3183-045		Manufactured	No				Each	27.0000		8			
D3183-045									**			17/03/01	DAS 36 9-89
Bearing Assembly													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				FG				4					
				139821				2					
				141815				2					
				ST021				23					
				155637				3					
				156313				20		1			
M174B1.500X02.250		Purchased	No			100	f	7.6616	0.466	1.962105			
M174B1 500X02 250									**				
17-4 SS Bar 1.50 X2.250													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				MAT010				7.661616					DAS 14 9-89
				m113568				1.0833					
				m133511				0.416					
				m135690				6.162316		1.97			17/02/23

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

DART AEROSPACE LTD		Work Order:	156957
Description: Roller Bracket Assembly		Part Number:	D3674-043
Inspection Dwg: D3674	Rev: B	Page 1 of 2	

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.162	+/-0.010	0.160	✓		Mic	GA-03
4.26	+/-0.030	4.211	✓		H-6	31006
1.89	+/-0.030	1.888	✓		Vern	GA-03
1.16	+/-0.030	1.160	✓		"	"
2.08	+/-0.030	2.080	✓		"	"
0.36	+/-0.030	0.360	✓		"	"
R0.25	+/-0.030	R0.250	✓		R-6	ref.
R0.19	+/-0.030	R0.188	✓		"	"
R0.19	+/-0.030	R0.188	✓		"	"
R0.25	+/-0.030	R0.250	✓		"	"
R0.13	+/-0.030	R0.125	✓		"	"
Ø0.392	+0.002/-0.000	0.3920	✓		Mic	GA-03
R0.29	+/-0.030	R0.290	✓		R-6	ref.
R0.50	+/-0.030	R0.500	✓		"	"
3.954	+/-0.010	3.958	✓		H-6	31006
0.162	+/-0.010	0.163	✓		Mic	GA-03
0.995	+/-0.010	0.991	✓		H-6	31006
Ø0.201 x 0.100 DP	+0.005/-0.001 x +/-0.010	Ø0.201 x 0.098	✓		Vern	GA-13
1.18	+/-0.030	1.180	✓		"	"
0.10	+/-0.030	0.1055	✓		H-6	31006
5.323	+/-0.010	5.328	✓		"	"
5.036	+/-0.010	5.040	✓		"	"
2.49	+/-0.030	2.486	✓		"	"
2.385	+/-0.010	2.386	✓		"	"
1.555	+/-0.010	1.556	✓		"	"
0.265	+/-0.010	0.266	✓		"	"
13°	+/-0.5°	13°	✓		Angle M	CNC-17
11°	+/-0.5°	11°	✓		"	"
0.795	+/-0.010	0.797	✓		Vern	GA-13
R0.25	+/-0.030	R0.250	✓		R-6	ref.
R0.19	+/-0.030	R0.188	✓		"	"
0.182	+/-0.010	0.181	✓		Vern	GA-13
0.020 x 30°	+/-0.010 x +/-0.5°	0.020 x 30°	✓		"	"
0.170	+/-0.010	0.173	✓		"	"
0.07 x 45°	+/-0.030 x +/-0.5°	0.068 x 45°	✓		"	"
0.741	+/-0.010	0.734	✓		H-6	31006
4.8°	+/-0.5°	4.8°	✓		Angle M.	CNC-17
R0.06	+/-0.030	R0.063	✓		R-6	ref.
0.032	+/-0.010	0.030	✓		D-6	GA-08

DART AEROSPACE LTD		Work Order:	156957
Description: Roller Bracket Assembly		Part Number:	D3674-043
Inspection Dwg: D3674 Rev: B		Page 2 of 2	

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.050	+/-0.010	0.050	✓		Vern	GA-13
0.625	+/-0.010	0.623	✓		"	"
0.235	+/-0.010	0.234	✓		"	"
R0.100	+/-0.010	R0.101	✓		R-6	ref.
0.200	+/-0.010	0.200	✓		Vern	GA-13
0.080	+/-0.010	0.078	✓		"	"
0.390	+/-0.010	0.391	✓		"	"

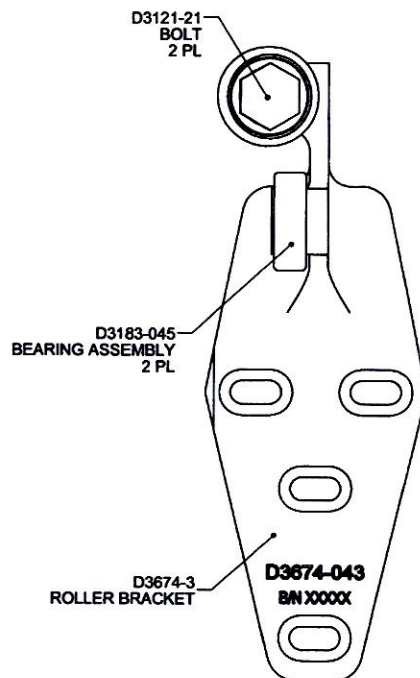
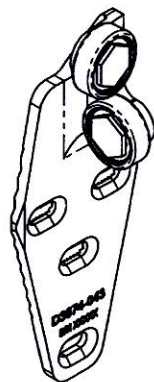
Measured by: D.A. DAS	Checked by: 33 9-89	QC Inspector:
Date: 17-02-25 08 9-89	Date: 17/03/01	Date:

Engineering Approval: (if necessary)	Date:
--	--------------

Rev	Date	Change	Revised by	Approved
A	16.08.30	New Issue	KJ	

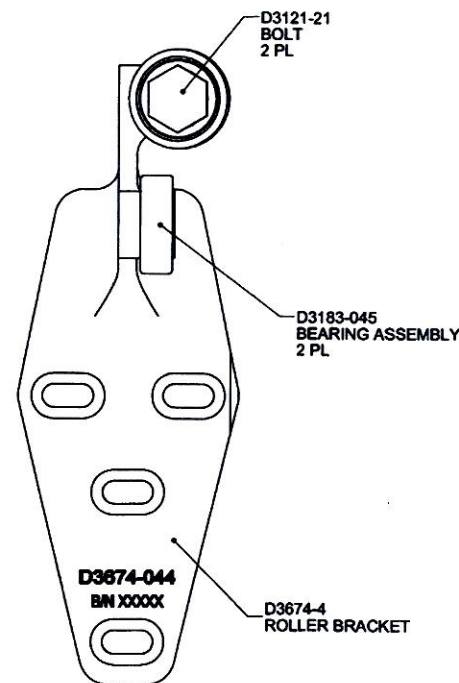
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	X	D3674-043	ROLLER BRACKET ASSEMBLY
1	1	D3674-3	ROLLER BRACKET
2	2	D3183-045	BEARING ASSEMBLY
3	2	D3121-21	BOLT

ITEM	QTY	P/N	DESCRIPTION
	X	D3674-044	ROLLER BRACKET ASSEMBLY
1	1	D3674-4	ROLLER BRACKET
2	2	D3183-045	BEARING ASSEMBLY
3	2	D3121-21	BOLT

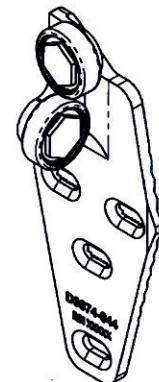


D3674-043 ROLLER BRACKET ASSEMBLY

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 156951 MJS
1702-13



D3674-044 ROLLER BRACKET ASSEMBLY



NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.37 lbs
- 8) TORQUE D3121-21 BOLT 15-25 in lbs (1.7-2.8 Nm)

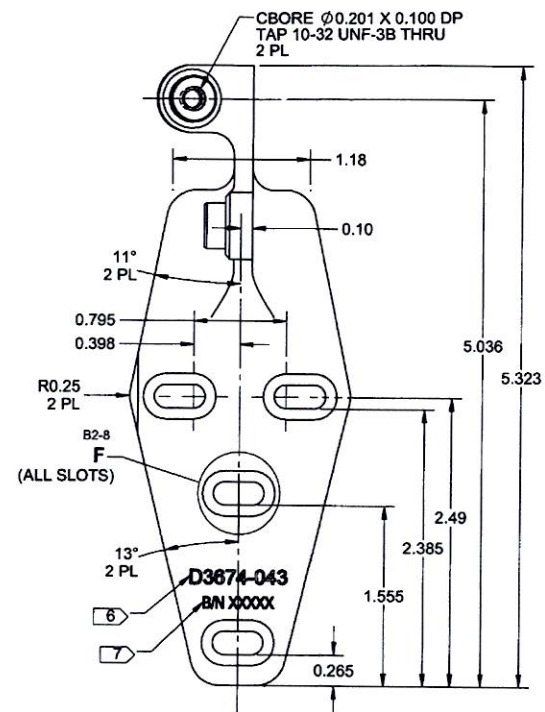
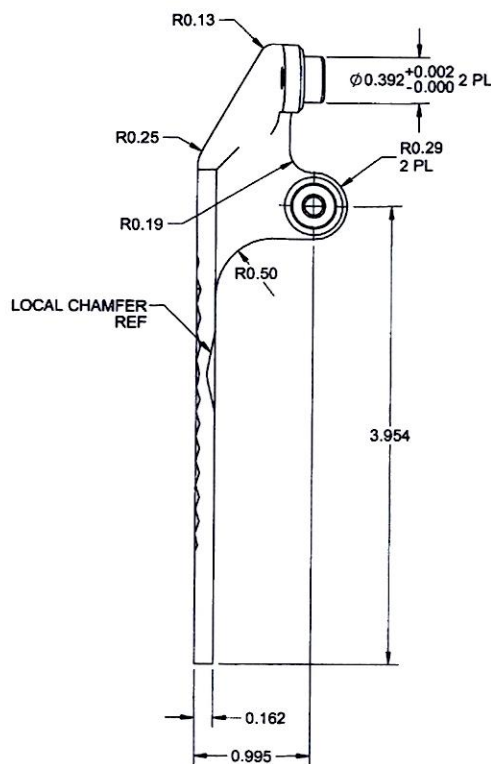
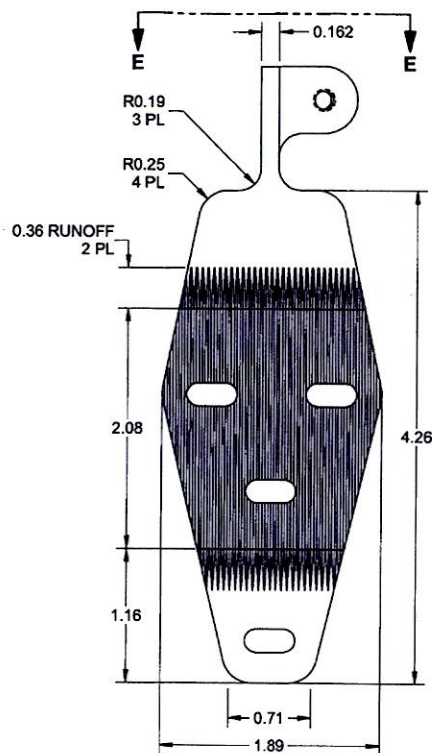
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2016-07-26

APPROVED

DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN	AJS	
CHECKED	MB	DRAWING NO. D3674
MFG. APPR.	RQ	REV. B
APPROVED	WM	SHEET 3 OF 8
DE APPR.	DS	SCALE
DATE	16.06.01	TITLE ROLLER BRACKET ASSEMBLY NTS

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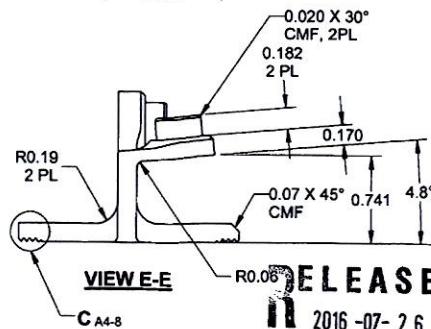
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D3674-3 ROLLER BRACKET $\triangle$

NOTES:

- 1) MATERIAL: 17-4 PH, STAINLESS STEEL BAR
PER AMS 5604/5643
GRAIN DIRECTION MUST BE ALONG THE LENGTH OF THE BRACKET
MINIMUM YIELD TENSILE STRENGTH = 100 ksi
MINIMUM ULTIMATE TENSILE STRENGTH = 150 ksi
REF. DART SPEC. M17-4-B
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE WITH DART P/N "D3674-043" WITH 0.15 HIGH LETTERS TO A
MAX DEPTH OF 0.010 IN AREA SHOWN.
- 7) IDENTIFICATION: SCRIBE B/N PER QSI 044 6.4
- 8) WEIGHT: 0.31 lbs
- 9) ALL NON DIMENSIONED FEATURES PER CAD FILE "D3674-3RevB.STP/SLDPRT"



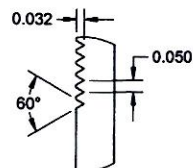
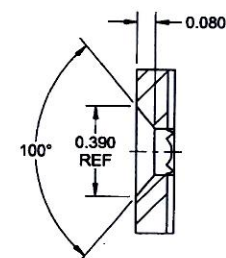
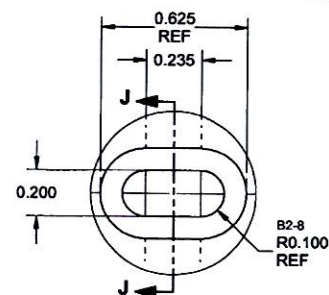
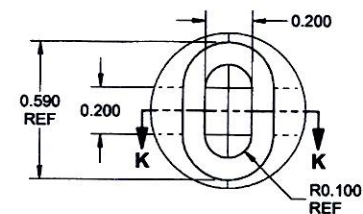
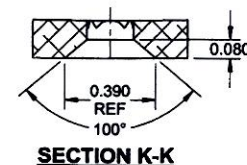
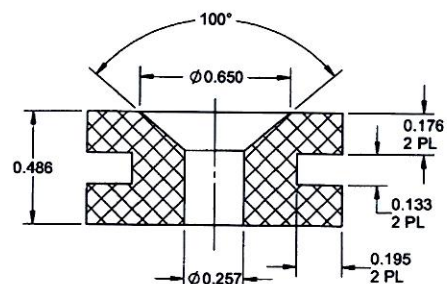
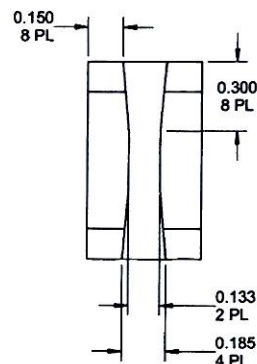
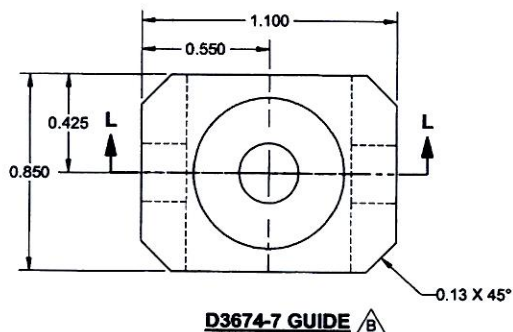
VIEW E-E

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DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	MB	DRAWING NO.	REV. B
MFG. APPR.	RQ	D3674	SHEET 4 OF 8
APPROVED	WM	TITLE	SCALE
DE APPR.	D3	ROLLER BRACKET ASSEMBLY	NTS
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8 7 6 5 4 3 2 1



NOTES:

- 1) MATERIAL: DELRIN II 150E OR ACETRON GP ACETAL, BAR
REF DART SPEC M-DELRIN-B
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER DART QSI 044
- 7) WEIGHT: 0.02 lbs

DETAIL C

RELEASED
2016-07-26

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DESIGN	AJS
DRAWN	AJS
CHECKED	MB
MFG. APPR.	RQ
APPROVED	WM
DE APPR.	DS
DATE	16.06.01

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D3674** REV. B
SHEET 8 OF 8
TITLE **ROLLER BRACKET ASSEMBLY** SCALE NTS

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